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(56) Documents Cited

GB 2107983 A WO 92/09257 A1 US 4589994 A

(58) Field of Search

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ONLINE DATABASES: WPI, CLAIMS, CAS ONLINE

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(54) **Smelly feet prevention**

(57) A mat for use in the treatment or prevention of smelly feet comprises a bibulous material holding a composition of phenol or mixture of phenols. The composition is applied to clothed or bare feet by placing the foot on the mat and applying pressure to release the composition from the mat. The composition may also include an inert carrier, such a macrogel.

TREATMENT OF SMELLY FEET

This invention relates to treatment of smelly feet.

Smelly feet, sometimes referred to as osmidrosis or
5 bromidrosis of the feet, is a common and inconvenient
condition in which the sufferer is prone to strong
offensive foot odours, not necessarily through lack of
personal hygiene. These odours are thought to be caused
by the presence and growth of unobserved fungi or other
10 micro-organisms.

Phenol and derivatives of it have been used as
disinfectants for many years.

International Patent Application No. PCT/GB91/02116
discloses use of phenol in treatment of smelly feet or
15 other parts of the body. Also described are compositions
for application to the relevant part of the body or to a
garment or dressing which is to contact the part of the
body to be treated. Application may be by means of an
ointment, an aerosol or a push-up 'stick' or 'roll-on'
20 applicator all of which are well known for the
application of topical cosmetics. Experimental data in
PCT/GB91/02116 demonstrate the surprising effect
achievable by application of a phenol containing
composition to garments daily for a period of several
25 days. Following a course of treatment, former owners of
smelly feet were found to be free from affliction for
very long periods.

Experience has shown that some people find it tiresome to have to apply a deodorising composition to their feet or socks daily, even if only for several days.

5 Application to the inside of socks or stockings (so that the composition contacts the skin) can be a somewhat fiddly process, requiring each garment in turn to be turned inside out before the deodorant is applied, for example using an aerosol or 'stick' or 'roll-on'
10 applicator, with subsequent returning of the garment to its original conformation before donning.

The present invention provides convenient means and methods for treatment of smelly feet.

According to one aspect of the present invention
15 there is a method for treatment or prevention of smelly feet, the method comprising

- (i) placing a foot on a bibulous mat which is holding a composition comprising a phenol or a mixture of phenols, and
- 20 (ii) using the foot to apply pressure on the mat so that it releases some of the composition, which is thereby caused or allowed to contact the foot.

In a preferred embodiment of the method the above steps are performed firstly with a naked foot prior to
25 donning of a sock, stocking or other garment for the foot, then repeated with the clothed foot so that the garment comes into contact with the composition. In this

way both the foot and the sock, stocking or other garment are treated with the phenol-containing composition.

A convenient way of performing the invention is for
5 the owner of the foot or feet to be treated to stand on the mat so that their own body weight causes release of the composition. This might be after bathing or showering or whilst getting dressed, for instance. In the above mentioned preferred method of the present
10 invention, the person whose feet are treated may stand on the mat whilst dressing, their bare feet contacting the mat and therefore released composition before they put on their socks. If the person then continues to stand in their socks on the mat whilst completing their dressing
15 then the socks too will contact the composition. Clothing material being absorbent, this provides for extended contact of the foot with the composition throughout the day.

According to a preferred embodiment of the present
20 invention, the steps of one of the described methods are performed daily for a period of several days, perhaps of the order of 3-10 days or a week, followed by a longer period in which the method is not performed, the composition not being applied to the feet or footwear
25 during that longer period.

Another aspect of the present invention is a mat made of bibulous material impregnated with a composition

which comprises a phenol or a mixture of phenols, the mat being compressible for release of the composition on application of pressure. The mat is envisaged for use in
5 one of the methods of the present invention.

For use in the method of the present invention, the mat should have an area of at least large enough for a foot to be placed on it, preferably large enough for a person to stand with both their feet on it. This might
10 be of the order of about 100cm^2 to 1600cm^2 , for instance. A suitable thickness would be of the order of 0.5cm

The material of the mat, bibulous to hold the composition, may be felt, perhaps lambswool, or foam, sponge, indeed any material with the desired
15 characteristics. The mat should release on application of pressure at least some of the composition which it holds.

The mat may sit in a tray, perhaps of a plastic material such as polypropylene to be light but resistant
20 to detrimental effects of the phenolic composition and accidental knocks. Conveniently, the tray may have a lid which should be easy to open and close.

In preferred embodiments of the invention, the composition comprises phenol in a concentration
25 preferably of 0.5 to 1% W/W phenol combined with any suitable inert carrier. Macrogols may be used in the composition, preferably polyethylene glycol (PEG),

suitably of molecular weight of between 300 and 800. If necessary, PEG may be thinned with distilled water.

Compositions including greater than 1% W/W phenol
5 can be used, if appropriate.

Apart from phenol itself (C_6H_5OH), the term "phenol" as used herein is intended to have broad meaning unless the context indicates otherwise. It covers halogenated phenols, bisphenols, cresols, xylenols and other alkyl
10 phenols, tar acids and so on.

CLAIMS

1. A mat comprising a bibulous material impregnated with a composition comprising a phenol or a mixture of phenols,
5 wherein the mat is compressible to allow the release of the composition.
2. The mat according to claim 1 large enough to allow a user to place both feet on it.
3. The mat according to claim 2 having an area of about
10 100 to 1600cm².
4. The mat according to any one of claims 1 to 3 having a thickness of about 0.5cm.
5. The mat according to any preceding claim wherein the bibulous material is felt, lambswool, foam or sponge.
- 15 6. The mat according to any preceding claim wherein the composition comprises a 0.5 to 1% w/w of a phenol or mixture of phenol in an inert carrier.
7. The mat according to claim 6 wherein the inert carrier is one or more macrogels.
- 20 8. A mat substantially as described herein.
9. A method for cosmetic treatment or prevention of smelly feet comprising;
 - (i) placing a foot on a bibulous mat which is holding a composition comprising a phenol or a mixture of phenols,
25 and
 - (ii) using the foot to apply pressure on the mat so that it releases some of the composition, which is thereby caused or allowed to contact the foot.

10. The method according to claim 9 wherein the method is repeated on a bare and clothed foot.

11. The method according to claim 9 or 10 wherein the method is repeated for 3 to 10 days, followed by a period
5 when the method is not performed.

12. A method substantially as described herein.

Examiner's report to the Comptroller under
Section 17 (The Search report)

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Relevant Technical fields

- (i) UK CI (Edition L) A5B (BLF, BLG, BLJ)
C3V (VET)
- (ii) Int CI (Edition 5) A61K, A61F

Search Examiner

M R WENDT

Databases (see over)

(i) UK Patent Office

(ii)

ONLINE DATABASES: WPI, CLAIMS, CAS ONLINE

Date of Search

4 SEPTEMBER 1993

Documents considered relevant following a search in respect of claims

1-12

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2107983 A (WALMSLEY) See Claims 1-5	1
A	US 4589994 (MOSEMAN) See Abstract column 4 lines 9-13	1
A,E	WO 92/09257 A1 (HEARD) Referred to in application	1

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).